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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,002	10/24/2003	Jussi Ruutu	NOKM.076PA	9364

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EXAMINER


BLOUNT, STEVEN

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/693,002	Applicant(s)  RUUTU ET AL.	
	Examiner Steven Blount	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 2 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent application publication 2003/0112756 to Le Gouriellec et al.

Le Gouriellec et al teach monitoring a congestion level (see discussion of watermark on page 3 par 0035) and performing a QOS action – marking network traffic – (see page 2, par 0028), wherein the packets are sent to other network entities and discarded by other switching nodes “in case of congestion.” Again, see page 2, par 0028, and note that this corresponds with the last paragraph of claim 1, wherein the congestion processing is altered by the markings on the network traffic.

With regard to claim 2, see the above, and the discussion of watermark in page 3, paragraph 35.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 6,714,517 to Fawaz et al.

Fawaz et al teach monitoring a congestion level in col 12 lines 20+, and exchanging QOS action messages in col 11 lines 25+. Although it is not explicitly stated that these two actions are linked, as claimed (ie, monitoring followed by exchanging the messages) in the reference, one of ordinary skill in the art would find it obvious to implement it as such; and further, it is even implied that it occurs in this manner (“Periodically, the QOS Node sends a control message to its neighboring QOS Nodes, including a current list of all congested SLA’s.” Col 11 lines 27+).

5. Claims 13 – 16 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent application publication 2003/0112756 to Le Gouriellec et al.

Le Gouriellec et al teach the invention as described above. Note that in paragraph 39, it is stated that the “unmarked packets (are caused) to be stored in the congestion area of the queue *for transmitting via an output port 53*” (ie, acting “on packets of data from the plurality of data streams whose signaling indicates a lack of prior QOS actions.” Note the monitoring of the storage level in par 37, and further note that while a “congestion control unit” is not explicitly defined, the shaper/droper 46 could be considered to be an obvious form of a congestion control

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unit which one of ordinary skill in the art would realize would be useful for monitoring the congestion level as described in line 4 of paragraph 38.

With regard to claims 14 – 15, note that it would be obvious to bypass the QOS unit (classifier/meter/marker) if there is no congestion, and engage it if there is, in order to promote packet flow.

With regard to claim 16, see the discussion of delaying the packets in claim 11.

6. Claims 3 – 12 and 17 - 20 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent application publication 2003/0112756 to Le Gouriellec et al as applied to claims 1 – 2 and 13 – 16 above, and further in view of US patent application publication 2004/0090917 to Ruutu et al.

With regard to claim 3, Le Gouriellec et al teach the invention as described above, but do not teach recording the QOS actions taken. Ruutu et al, in the same type of process (see pages 3 – 4) teaches recording the QOS actions. See the drop history unit discussed on page 4, paragraph 42, and shown in figure 4, box S55. It would have been obvious to one of ordinary skill in the art to have recorded the QOS actions of Le Gouriellec et al in light of Ruutu et al in order to deal with the congestion amongst the different streams in a fair manner.

With regard to claim 4, prioritizing would be obvious in view of the teachings of Ruutu et al in par 43 and par 45 of page 4.

With regard to claim 5, dropping packets is taught in both Le Gouriellec et al and Ruutu et al.

With regard to claim 6, note the discussion of signaling above.

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With regard to claim 7, out of band signaling would be an obvious variation of the marking (in-band) signaling taught in Le Gouriellec et al.

With regard to claim 8, see the rejection of claim 1 above, and note that the first QOS actions consist of marking the packets as described in par 28 of Le Gouriellec et al, and choosing packets with a (higher) priority to be acted upon, as described in par 45 of Ruutu: “instead another flow is selected”.

With regard to claim 9, see figure 2 of Le Gouriellec et al.

With regard to claim 10, see the discussion of marking above.

With regard to claim 11, see the discussion above, particularly of the receiving unit in Le Gouriellec et al, wherein “The unmarked CR traffic, however, is stored using the reserved CR bandwidth” (par 29, page 2), which corresponds to the “delaying” of packets “whose signaling indicates a lack of QOS actions taken by the first forwarding terminal” (last sentence of claim).

With regard to claim 12, see the discussion of marking above.

With regard to claims 17 - 18, see the discussion of the history unit in Ruutu above.

With regard to claim 19, see the discussion of the packet marking unit above.

With regard to claim 20, see the discussion above, and note that the process would be obvious to implement in a computer readable medium.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571 - 272 - 3071. The examiner can normally be reached on M-F 9:00 - 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chau Nguyen, can be reached on 571 – 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ajit Patel
Primary Examiner

SB



3/4/04